

IFW DAE

PH-7124

CERTIFICATE OF MAILING

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Janet C Sudol

Type or print name

Janet C Sudol

Signature

Oct 14, 2004

Date



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

SHUANG LIU

PATENT NO: 6,776,977 B2

ISSUED: AUGUST 17, 2004

FOR: POLYPODAL CHELANTS FOR
METALLOPHARMACEUTICALS

101033.770

Mail Stop: PGPUB
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION TO CORRECT PATENT TERM ADJUSTMENT PERIOD
IN GRANTED PATENT

Sir:

The granted patent erroneously lists the patent term adjustment period as 2 days. The Determination of Patent Term Adjustment under 35 U.S.C. 154(b) received with the Notice of Allowance lists the patent term adjustment as 38 days. The patent term adjustment history from PAIR shows the USPTO Delay as 98 days and the Applicant Delay as 96 days. The term was reduced 36 days due to "Workflow -Drawings finished" which is incorrect. There are no drawings in this case and therefore we request that the 36 day reduction be removed and the term be re-adjusted to 38 days.

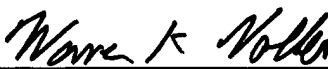
Enclosed is a copy of the cover page of the patent, copy of Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) received with the Notice of Allowance, copy of Image File Wrapper from PAIR and copy of Patent Term Adjustment History from PAIR for your convenience.

Applicant believes this error is ascribable to the Patent Office, applicant is requesting re-consideration of the patent term adjustment within two months of the date of the issued patent under §1.705(d). Accordingly, no fees are required. However, if this is incorrect, the Commissioner is hereby authorized to charge the \$200 fee under 37 CFR §1.18(e) and any additional fees that may be required to Deposit Account No. 19-3880 in the name of Bristol-Myers Squibb Company.

Respectfully submitted,

Bristol-Myers Squibb Company
Patent Department
P.O. Box 4000
Princeton, NJ 08543-4000
(203) 677-6997

Date: *October 14, 2004*



Warren Volles
Attorney for Applicant
Reg. No. 33,810



US006776977B2

4A

(12) **United States Patent**
Liu

(10) Patent No.: **US 6,776,977 B2**
(45) Date of Patent: **Aug. 17, 2004**

(54) **POLYPODAL CHELANTS FOR METALLOPHARMACEUTICALS**

(75) Inventor: **Shuang Liu, Chelmsford, MA (US)**

(73) Assignee: **Bristol-Myers Squibb Pharma Company, Princeton, NJ (US)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 2 days.

(21) Appl. No.: **10/033,770**

(22) Filed: **Dec. 27, 2001**

(65) **Prior Publication Data**

US 2002/0090342 A1 Jul. 11, 2002

Related U.S. Application Data

(60) Provisional application No. 60/260,615, filed on Jan. 9, 2001.

(51) Int. Cl.⁷ **A61K 51/00; A61B 5/00; C07F 9/02; A01N 57/10**

(52) U.S. Cl. **424/1.77; 424/9.36; 424/9.4; 558/166; 514/143**

(58) Field of Search **568/8, 17; 424/1.65; 424/9.36, 9.364, 9.365, 1.77, 9.4; 558/166; 514/143**

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,974,268 A	8/1976	Subramanian et al.
4,399,817 A	8/1983	Benedict
4,882,142 A	11/1989	Simon et al.
4,898,724 A	2/1990	Simon et al.
5,206,370 A	4/1993	Schwartz et al.
5,236,695 A	8/1993	Winchell et al.
5,300,279 A *	4/1994	Simon et al. 424/1.77
5,342,606 A	8/1994	Sherry et al.
5,450,601 A	9/1995	Okuda
5,565,184 A	10/1996	Dunn et al.
5,593,659 A	1/1997	Winchell et al.
5,744,120 A	4/1998	Edwards et al.
6,107,482 A	8/2000	Cook et al.

FOREIGN PATENT DOCUMENTS

EP	0210043	1/1987
EP	291605	5/1987
EP	441953 B1	8/1991
EP	0468634	1/1992
EP	569132 B1	11/1993
WO	WO 92/08725	5/1992
WO	WO 94/26754	11/1994
WO	WO 95/01124	1/1995
WO	WO 95/05118	2/1995
WO	WO 9630377	10/1996
WO	WO 97/31005	8/1997

OTHER PUBLICATIONS

Stanley, I. K. et al. *Anticancer Res.* 1988, 8, 681-684.
Dewanjee, M. K. *Semin. Nucl. Med.* 1990, 20, 5.
Liu, et al *Pure & Appl. Chem.* 1991, 63, 427.

Garrett et al., *J. Am. Chem. Soc.* 1991, 113, 2965-2977.
Tor, Y., et al. *J. Am. Chem. Soc.* 1992, 114, 6653-6661.
Griffiths et al., *Bioconj. Chem.* 1992, 3, 91.
Liu, S., et al. *J. Am. Chem. Soc.* 1992, 114, 6081.
Tor et al. *J. Am. Chem. Soc.* 1992, 6661-6671.
Stack et al., *J. Am. Chem. Soc.* 1992, 114, 1512-1514.
Liu, S., et al. *Inorg. Chem.* 1993, 32, 2773.
Liu, S., et al. *Inorg. Chem.* 1993, 32, 4268.
Liu, S., et al. *Inorg. Chem.* 1993, 32, 1756.
Karpishin, T. B., et al. *J. Am. Chem. Soc.* 1993, 115, 182-192.
Karpishin, T. B., et al. *J. Am. Chem. Soc.* 1993, 115, 6115-6125.
Silberstein, E. B. *Semin. Oncol.* 1993, 20, 10-20.
Ackey, D. and Yardly, J. *Semin. Oncol.* 1993, 20 (suppl.), 27-31.
Dayan, I., et al. *Inorg. Chem.* 1993, 32, 1467-1475.
Yakirevitch, P., et al. *Inorg. Chem.* 1993, 32, 1779-1787.
Jurisson, et al. *Chem. Rev.* 1993, 93, 1137.
Serafini, A. N. *J. Radiation Oncol. Biol. Phys.* 1994, 30, 1187-1194.
Carvan, P., et al. *J. Am. Chem. Soc.* 1995, 117, 11230-11238.
Yang, L.-W. et al. *Inorg. Chem.* 1995, 34, 4921-4925.
Hom et al., *Nucl. Med. Biol.* 1997, 24, 485.
Liu, et al. *Bioconj. Chem.* 1997, 8, 621.
McEwan, A. J. B. *Semin. Nucl. Med.* 1997, 27, 165-182.
Liu, S., et al. *Bioconjugate Chem.* 1997, 8, 621-636.
Meyer, M., et al. *J. Am. Chem. Soc.* 1997, 119, 10093-10103.
P. Kong Thoo Lin et al., *Synthesis*, Jun. 1998, 859-866.
Dilworth, J. R. and Parrott, S. J. *Chem. Soc. Rev.* 1998, 27, 43.
Kuksa et al, *Synthesis* 1999, 6, 1034-1038.
Liu, S. and Edwards, D. S. *Chem. Rev.* 1999, 99, 2235-2268.
Jurisson, S. and Lydon, J. D. *Chem. Rev.* 1999, 99, 2205-2218.
Anderson, C. J. and Welch, M. J. *Chem. Rev.* 1999, 99, 2219-2234.
Volkert, W. A. and Hoffman, T. J. *Chem. Rev.* 1999, 99, 2269-2292.
Caravan, P. et al. *Chem. Rev.* 1999, 99, 2293-2352.
Chem. Commun. 1999, 457-458.
Runge, V. M. *J. Magn. Reson. Imaging* 2000, 12, 205-213.
Bouchet, L. G., et al. *J. Nucl. Med.* 2000, 41, 682-687.
Krishnamurthy, G. T. and Krishnamurthy, S. J. *Nucl. Med.* 2000, 41, 688-691.

* cited by examiner

Primary Examiner—Michael G. Hartley

(74) *Attorney, Agent, or Firm*—Warren K. Volles; Woodcock Washburn LLP

(57) **ABSTRACT**

Tripodal polyaminophosphonate chelants are disclosed, as well as chelates of the chelants with metal ions to form radiopharmaceutical and radioactive, MRI and X-ray or CT imaging compounds and compositions. Therapeutic and imaging methods of use are also disclosed.

3 Claims, No Drawings



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

4B

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,770	12/27/2001	Shuang Liu	PH-7124	9015
23914	7590	04/01/2004	EXAMINER	
STEPHEN B. DAVIS BRISTOL-MYERS SQUIBB COMPANY PATENT DEPARTMENT P O BOX 4000 PRINCETON, NJ 08543-4000			HARTLEY, MICHAEL G	
			ART UNIT	PAPER NUMBER
			1616	
DATE MAILED: 04/01/2004				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 38 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 38 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

4C

Printer Friendly

10/033,770 POLYPODAL CHELANTS FOR METALLOPHARMACEUTICALS

Patent Term Adjustment History

Patent Term Adjustment (PTA) for Application Number: 10/033,770			
			Days
Filing or 371(c) Date:	12-27-2001	USPTO Delay (PTO):	98
Issue Date of Patent:	08-17-2004	Three Years:	-
Pre-Issue Petitions (days):	+0	Applicant Delay(APPL):	96
Post-Issue Petitions (days):	+0	Total PTA:	2
USPTO Adjustment(days):	+0	Explanation Of Calculations	
Patent Term Adjustment History			
Date	Contents Description	PTO(Days)	APPL (Days)
08-17-2004	Patent Issue Date Used in PTA Calculation		
07-14-2004	Receipt into Pubs		
07-13-2004	Dispatch to FDC		
07-13-2004	Application Is Considered Ready for Issue		
07-13-2004	Workflow - Drawings Finished	↑	36
06-28-2004	Mailroom Date of Issue Fee Payment	↑	
06-28-2004	Issue Fee Payment Recorded	↑	
06-22-2004	Receipt into Pubs	↑	
04-26-2004	Workflow - File Sent to Contractor	↑	
04-01-2004	Correction - Oath or Declaration NOT Required	↑	
04-01-2004	Mail Notice of Allowance	↑	
04-01-2004	Mail Oath of Declaration Required	↑	
04-01-2004	Mail Examiner Interview Summary (PTOL - 413)	↑	
04-01-2004	Mail Examiner's Amendment	↑	
03-31-2004	Issue Revision Completed	↑	
03-31-2004	Oath or Declaration Required	↑	
03-31-2004	Notice of Allowance Data Verification Completed	↑	
03-31-2004	Examiner's Amendment Communication	↑	
03-31-2004	Notice of Allowability	↑	
03-19-2004	Examiner Interview Summary Record (PTOL - 413)	↑	
02-19-2004	Date Forwarded to Examiner	↑	
02-09-2004	Response after Non-Final Action	↑	60
01-30-2004	Mail Notice of Informal or Non-Responsive Amendment	↑	↑
01-29-2004	Date Forwarded to Examiner	↑	↑
12-11-2003	Informal or Non-Responsive Amendment after Examiner Action	↑	↑
12-11-2003	Response after Non-Final Action	↑	↑

09-16-2003	Mail Non-Final Rejection		
09-16-2003	Non-Final Rejection		↑
09-11-2003	Case Docketed to Examiner in GAU		↑
07-20-2003	Date Forwarded to Examiner		↑
07-10-2003	Response to Election / Restriction Filed		↑
07-10-2003	Request for Extension of Time - Granted		↑
06-05-2003	Mail Restriction Requirement	98	
06-05-2003	Requirement for Restriction / Election		↑
11-24-2002	Case Docketed to Examiner in GAU		↑
05-17-2002	Information Disclosure Statement (IDS) Filed		↑
03-26-2002	Application Dispatched from OIPE		↑
03-25-2002	Application Is Now Complete		↑
03-13-2002	IFW Scan & PACR Auto Security Review		↑
01-17-2002	IFW Scan & PACR Auto Security Review		↑
12-27-2001	Initial Exam Team nn		↑

[Close Window](#)



Printer Friendly

10/033,770

POLYPODAL CHELANTS FOR METALLOPHARMACEUTICALS

Image File Wrapper

To view page-by-page, click the desired Document Description. To download and print the complete document, select the document(s) and click Download

Mail Room Date	Document Description	Page Count
06-28-2004	Issue Fee Payment Recorded	1
04-01-2004	Notice of Allowance	3
04-01-2004	Notice of Allowance	2
04-01-2004	Examiner Interview Summary Record (PTOL - 413)	2
04-01-2004	Issue Information on File Wrapper	1
04-01-2004	Search info on File Wrapper	1
02-09-2004	Amendment	5
02-09-2004	Claim	18
02-09-2004	Applicant Arguments or Remarks Made in an Amendment	3
01-30-2004	Miscellaneous Action with SSP	2
12-11-2003	Miscellaneous Incoming Letter	4
12-11-2003	Amendment	1
12-11-2003	Claim	6
12-11-2003	Applicant Arguments or Remarks Made in an Amendment	3
09-16-2003	Non-Final Rejection	5
09-16-2003	List of references cited by Examiner	1
09-16-2003	List of References cited by Applicant	4
09-15-2003	Examiner Search Notes	1
09-13-2003	Examiner Search Notes	44
07-10-2003	Miscellaneous Incoming Letter	4
07-10-2003	Amendment	1
07-10-2003	Applicant Arguments or Remarks Made in an Amendment	10
06-05-2003	Requirement for Restriction/Election	15
12-23-2002	Change of Address	1
05-17-2002	Information Disclosure Statement	2

05-17-2002	Foreign Reference	42
05-17-2002	Foreign Reference	31
12-27-2001	Issue Information on File Wrapper	1
12-27-2001	Search info on File Wrapper	1
12-27-2001	Claims recorded on File Wrapper	1
12-27-2001	Transmittal of New Application	2
12-27-2001	Specification	41
12-27-2001	Claim	19
12-27-2001	Abstract	1
12-27-2001	Oath or Declaration filed	2
12-27-2001	Fee Worksheet (PTO-875)	1
12-27-2001	Fee Worksheet (PTO-875)	1
12-27-2001	Claims Worksheet (PTO-2022)	1
12-27-2001	Application Data Sheet	1
12-27-2001	Transmittal of New Application	2
12-27-2001	Application Data Sheet	1
12-27-2001	Specification	41
12-27-2001	Claim	19
12-27-2001	Abstract	1
12-27-2001	Oath or Declaration filed	2

[Close Window](#)